Notice of Allowability	Application No.	Applicant(s)	
	09/661,222	OVERTON ET AL.	
	Examiner	Art Unit	
	Marc D. Thompson	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the amendment received 8/9/2005*.

2. ☒ The allowed claim(s) is/are *24-48*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

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(5) TOTAL

MARC D. THOMPSON
MARC THOMPSON
PRIMARY EXAMINER

EXAMINER AMENDMENT

1. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this Examiner's amendment was given in a telephone interview with Kent Genin (Reg. #37,834), on 10/28/2005. This amendment is purely meant to address an inadvertent misnumbering of the claims.

2. The application has been amended as follows:

This listing of claims will replace all prior versions and listings of claims in the application.

Claims 1- 23. (Cancelled)

24. (New) A method for retrieving data location information for data stored in a distributed network, comprising the steps of:

a) receiving at a first client a data query for retrieving data associated with an identification string, wherein the data is stored at a data repository and wherein a location string associated with the identification string of the data is stored in at least one of a plurality of data location servers;

b) transmitting a data location request from the first client to a server to retrieve the

location string associated with the identification string in the data query, the data location request including the identification string;

c) if the server is not a data location server, then operating the server as a next client and transmitting the data location request from the next client to a server logically associated with the next client;

d) repeating c) until the data location request is transmitted to a data location server, wherein a communication path is defined between the first client and the data location server; and

e) if the data location server does not possess the location string, transmitting a redirect message to the first client over the communication path, the redirect message containing information with which the first client is configured to determine a location of a second data location server, wherein the second data location server contains the location string.

25. (New) The method of claim 24, wherein transmitting the redirect message comprises transmitting a data location server table to the first client.

26. (New) The method of claim 25, further comprising:

f) calculating at the first client the location of the second data location server with a function commonly known to the data location server and the first client and based on the identification string and the data location server table.

27. (New) The method of claim 26, wherein the function comprises a hash function and

wherein the first client applies the hash function to the identification string and the data location server table to obtain the location of the second data location server.

28. (New) The method of claim 24, wherein transmitting the redirect message comprises transmitting a function to the first client.

29. (New) The method of claim 28, further comprising:

f) calculating at the first client the location of the second data location server with the transmitted function.

30. (New) The method of claim 29, wherein calculating at the first client the location of the second data location server comprises applying the transmitted function to the identifier string.

31. (New) The method of claim 30, wherein applying the transmitted function generates a URL of the second data location server.

32. (New) The method of claim 24, wherein a length of the identification string and the location string each is variable.

33. (New) A method for retrieving data location information for data stored in a distributed network, comprising the steps of:

a) receiving at a first client a data query for retrieving data associated with an identification string, wherein the data is stored at a data repository in the distributed network and wherein a location string associated with the identification string of the data is stored in at least one of a plurality of data location servers;

b) transmitting a data location request from the first client to a first data location server to retrieve the location string associated with the identification string in the data query, the data location request including the identification string;

c) if the first data location server does not possess the location string, transmitting a redirect message to the first client, the redirect message containing information for use by the first client to calculate a location of a second data location server, wherein the second data location server contains the location string;

d) calculating the location of the second data location server at the first client; and

e) transmitting the data query from the first client to the second data location server.

34. (New) The method of claim 33, wherein transmitting the redirect message comprises transmitting a data location server table to the first client.

35. (New) The method of claim 34, wherein calculating the location of the second data location server comprises calculating the location of the second data location server with a function commonly known to the first data location server and the first client and based on the data location server table and the identification string.

36. (New) The method of claim 35, wherein the function comprises a hash function and wherein the first client applies the hash function to the identification string and the data location server table to obtain the location of the second data location server.

37. (New) The method of claim 33, wherein transmitting the redirect message comprises transmitting a function to the first client.

38. (New) The method of claim 37, wherein calculating at the first client the location of the second data location server comprises applying the transmitted function to the identifier string.

39. (New) The method of claim 38, wherein applying the transmitted function generates a URL of the second data location server.

40. (New) A system for retrieving data location information for data stored in a distributed network, the system comprising:

a plurality of data repositories configured to store data, wherein the data is associated with a respective identifier string in each data repository;

a data location sewer network having a plurality of data location servers, each of the plurality of data location servers containing location strings associated with respective identifier strings and each of the plurality of data location servers having computer executable code configured to execute the following steps:

in response to receiving a data location request from a client to retrieve a location string associated with an identification string provided in the data location request, transmitting a redirect message to the client if the identification string is not associated with a location string at the data location server, wherein the redirect message contains information for use by the client to calculate a location of a different data location server in the plurality of data location servers, wherein the different data location server contains the location string.

41. (New) A system for retrieving data location information for data stored in a distributed network, the system comprising:

a data repository configured to store data, wherein the data is associated with an identifier string;

a client responsive to a data query to query a data location server for location information associated with the identifier string;

a data location server network comprising a plurality of data location servers, at least one of the plurality of data location servers containing location information associated with the identifier string, wherein each of the plurality of data location servers comprises computer executable code configured to execute the following steps in response to receiving a data location request from the client:

if the data location server contains the location string associated with the identification string provided in the data location request, the data location server transmits location information for use by the client to calculate a location of the data associated with the identification string;

if the data location server does not contain the location string associated with the identification string, the location server transmits a redirect message to the client, wherein the redirect message contains redirect information for use by the client to calculate a location of a different data location server in the plurality of data location servers, wherein the different data location server contains the location string.

42. (New) The system of claim 41, wherein the client and the plurality of data location servers each comprise a function commonly known to the client and the plurality of data location servers and wherein the client is configured to apply the commonly known function to the location information or redirect information.

43. (New) The system of claim 42, wherein the redirect message comprises a data location server table.

44. (New) The system of claim 43, wherein the commonly known function comprises a hash function and wherein the client is configured to apply the hash function to the identification string and the data location server table to obtain the location of the different data location server.

45. (New) The system of claim 42, wherein the redirect message comprises a transmitted function for use by the client.

46. (New) The system of claim 45, wherein the client is configured to calculate the location of the different data location server by applying the transmitted function to the identifier string.

47. (New) The system of claim 41, wherein the location information comprises a portion of a hash table distributed over the plurality of data location servers.

48. (New) The system of claim 41, further comprising a plurality of servers related in a logical hierarchy between the client and the data location servers, wherein each of the plurality of servers is configured to function as a next client and retransmit the data location request to a next logically associated server until a data location server receives the data location request.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc D. Thompson whose telephone number is 571-272-3932. The examiner can normally be reached on Monday-Friday, 9am-4pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, David Wiley can be reached at 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned has recently changed, and is now 571-273-8300.

4. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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